Claims

What is claimed is:

1. A device for the deionization of incoming water, comprising: (a) a tank; (b) a generally hollow distributor tube in said tank for ingress into and downward movement of said unpurified water through said tank; (c) slots adjacent the bottom of said generally hollow tube and near the bottom of said tank for distributing said unpurified water out of said hollow tube; and (d) a bed of purifying resin within said tank, and surrounding said generally hollow tube, through which said unpurified water travels upwardly, and is deionized to a high purity water by said ion exchange resin, as it moves upwardly through said resin, after egress from said slots.

2. The device as set forth in Claim 1, wherein said generally hollow tube is positioned substantially in the axial center of said tank.

3. The device of Claim 1, wherein said openings adjacent the bottom of said generally hollow tube are rectangular slots.

4. The device of Claim 1, wherein said bed of ion exchange resin is a mixed bed resin.

5. A method for the deionization of incoming water within a tank, comprising: (a) placing such water into a generally hollow distributor tube within said tank, for ingress into and downward movement of said unpurified water through said tube; (b) withdrawing water from said generally hollow distributor tube through slots adjacent the bottom of said generally hollow tube, and near the bottom of said tank; and (c) moving said water upwardly through said tank, and through a bed of ion exchange resin within said tank, so that said incoming water is deionized to a high purity water by upward movement through said resin after egress from said slots.

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6. The method of Claim 5, wherein said generally hollow tube is positioned substantially in the axial center of said tank.

7. The method of Claim 5, wherein said openings adjacent the bottom of said generally hollow tube are rectangular slots.

8. The method of Claim 5, wherein said bed of purifying resin is a mixed bed resin.

9. A method for the deionization of incoming water within a tank, comprising: (a) placing incoming water into the top of a tank; (b) moving said incoming water to the bottom of said tank; and (c) moving said incoming water upwardly through said tank, and through a bed of ion exchange resin within said tank, so that said incoming water is deionized to a high purity water by upward flow through said resin.

10. The method of Claim 9, wherein said incoming water is moved to the bottom of said tank by a generally hollow tube.

11. The method of Claim 10, wherein said generally hollow tube is positioned substantially in the axial center of said tank.

12. The method of Claim 10, wherein said generally hollow tube includes openings adjacent the bottom of said generally hollow tube are rectangular slots.

13. The method of Claim 9, wherein said bed of ion exchange resin is a mixed bed.

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